

**Listing of Claims**

The following listing of claims will replace all prior versions, and listings, of claims in the subject application:

Claims 1-8 (canceled).

9. (original) An electron-emitting device comprising:

a substrate; and

a surface conduction electron-emitting element formed on the substrate by a conductive thin film, said conductive thin film is formed by jetting solution including a metal micro-particle material on the area between the electrodes, which are formed on a substrate of the electron-emitting device, and vaporizing a volatile component in a solution dot pattern after the droplet of solution is jetted on the substrate so that a solid content is remained on the substrate,

wherein a diameter of the metal micro-particle in the solution is equal to or less than a roughness of a surface of the substrate where a dot pattern is formed, and a thickness of the dot pattern is greater than the roughness of the surface of the substrate.

10. (original) The electron emitting device as claimed in claim 9, wherein the electron-emitting part is formed at a density equal to or less than  $L_d/2$  where  $L_d$  denotes a dot diameter when a single dot is formed when an electron-emitting part of the surface conduction electron-emitting element is formed by combining the dot patterns, and combination of which is made by arranging a plurality of dots in one line.

11. (original) The electron emitting device as claimed in claim 9, wherein an electron-emitting part of the surface conduction electron-emitting element is formed by the combination of the dot patterns, and the dot pattern is electrically connected to the electrodes such that the dot pattern covers the electrodes with more than half dot of the dot pattern in the connection area of the dot pattern and the electrodes.

12. (original) The electron emitting device as claimed in claim 9 or 11, wherein an electron-emitting part of the surface conduction electron-emitting element is formed by the combination of the dot patterns, and the dot pattern is electrically connected to the electrodes such that the thickness of the dot pattern in the connection area is thicker than the thickness of the dot pattern of the other area.

13. (original) The electron emitting device as claimed in claim 11 or 12, wherein an electron-emitting part of the surface conduction electron-emitting element is formed by the combination of the dot patterns, and the dot pattern is electrically connected to the electrodes such that a plurality of the dot pattern are jetted and superimposed on a connection area of the dot pattern and the electrodes.

14. (original) The electron emitting device as claimed in claim 9, wherein the electrode is formed by a rectangle pattern or a combination of rectangle patterns, and a corner portion of the rectangle pattern is cut off.

15. (original) The electron emitting device as claimed in claim 9, wherein the electrode is formed by a rectangle pattern or a combination of rectangle patterns, and a corner portion of the electrode that faces with another electrode is cut off.

16. (original) The electron emitting device as claimed in claim 9, wherein the electrode is formed by a rectangle pattern or a combination of rectangle patterns, and a corner portion of the rectangle pattern is coated with the dot pattern.

17. (original) The electron emitting device as claimed in claim 9, wherein the electrode is formed by a rectangle pattern or a combination of rectangle patterns, and a corner portion of the electrode that faces with another electrode is coated with the dot pattern.

18. (original) The electron emitting device as claimed in claim 9, wherein a plurality of the surface conduction electron-emitting elements are formed on the substrate as a device group with a matrix form, and a distance between the electrodes of each pair of the surface conduction electron-emitting elements is shorter than an arrangement pitch of the device group.

19. (original) An image displaying apparatus, comprising:  
  
an electron-emitting device that includes: a substrate; and a surface conduction electron-emitting element formed on the substrate by a conductive thin film, said conductive thin film is

formed by jetting solution including a metal micro-particle material on the area between the electrodes, which are formed on the substrate of the electron-emitting device, and vaporizing a volatile component in solution dot pattern after the droplet of solution is jetted on the substrate so that a solid content is remained on the substrate, and a diameter of the metal micro-particle in the solution is equal to or less than a roughness of a surface of the substrate where a dot pattern is formed, and a thickness of the dot pattern is greater than the roughness of the surface of the substrate; and

a face plate arranged to be facing the electron-emitting device, and said face plate mounting fluorescent material and having a shape and size substantially the same with that of the electron-emitting device substrate.

20. (new) An electron-emitting device comprising:

a substrate; and

a surface conduction electron-emitting element formed on the substrate by a conductive thin film, said conductive thin film is formed by jetting solution including a micro-particle material on the area between the electrodes, which are formed on said substrate, and vaporizing a volatile component in a solution dot pattern after the droplet of solution is jetted on the substrate so that a solid content is remained on the substrate,

wherein a diameter of the micro-particle in the solution is equal to or less than a roughness of a surface of the substrate where a dot pattern is formed, and a thickness of the dot pattern is greater than the roughness of the surface of the substrate.

21. (new) The electron emitting device as claimed in claim 20, wherein a plurality of the

surface conduction electron-emitting elements are formed on the substrate as a device group with a matrix form, and a length between the electrodes of each pair of the surface conduction electron-emitting elements is shorter than an arrangement pitch of the device group.

22. (new) An electron-emitting device comprising:

a substrate; and

a surface conduction electron-emitting element formed on the substrate by a pair of electrodes and a conductive thin film, said conductive thin film is formed by jetting solution including a micro-particle material on the area of said electrodes and between the electrodes, which are formed on said substrate, and vaporizing a volatile component in a solution dot pattern after the droplet of solution is jetted on the substrate so that a solid content is remained on the substrate, wherein a length between the electrodes is in a range from  $1\mu\text{m}$  to  $100\mu\text{m}$ , a width of the electrodes is in a range from a few  $\mu\text{m}$  to a few hundred  $\mu\text{m}$  and a thickness of the electrodes is in a range from  $100\text{ \AA}$  to  $1\mu\text{m}$ , wherein said dot pattern thickness is in a range from  $10\text{ \AA}$  to  $500\text{ \AA}$  formed by jetting the quantity of the solution from a few picoliter to a few ten picoliter per dot pattern.

23. (new) The electron emitting device as claimed in claim 22, wherein a plurality of the surface conduction electron-emitting elements are formed on the substrate as a device group with a matrix form, and a length between the electrodes of each pair of the surface conduction electron-emitting elements is shorter than an arrangement pitch of the device group.

24. (new) An image displaying apparatus comprising:

an electron-emitting device that includes a substrate and a surface conduction electron-emitting element formed on the substrate by a conductive thin film, said conductive thin film is formed by jetting solution including a micro-particle material on the area between the electrodes, which are formed on the substrate, and vaporizing a volatile component in solution dot pattern after the droplet of solution is jetted on the substrate so that a solid content is remained on the substrate, and a diameter of the micro-particle in the solution is equal to or less than a roughness of a surface of the substrate where a dot pattern is formed, and a thickness of the dot pattern is greater than the roughness of the surface of the substrate; and

a face plate arranged to be facing the electron-emitting device, and said face plate mounting fluorescent material screen and having a shape and size substantially the same with that of the electron-emitting device substrate, wherein said fluorescent material screen is made up of three primary colors and black matrix area.

25. (new) An image displaying apparatus comprising:

an electron-emitting device that includes a substrate and a surface conduction electron-emitting element formed on the substrate by a pair of electrodes and a conductive thin film, said conductive thin film is formed by jetting solution including a micro-particle material on the area of said electrodes and between the electrodes, which are formed on the substrate, and vaporizing a volatile component in solution dot pattern after the droplet of solution is jetted on the substrate so that a solid content is remained on the substrate, wherein a length between the electrodes is in a range from  $1\mu\text{m}$  to  $100\mu\text{m}$ , a width of the electrodes is in a range from a few  $\mu\text{m}$  to a few hundred  $\mu\text{m}$  and a thickness of the electrodes is in a range from  $100\text{ \AA}$  to  $1\mu\text{m}$ , wherein said dot pattern thickness is in a range from  $10\text{ \AA}$  to  $500\text{ \AA}$  formed by jetting the quantity of the solution

from a few picoliter to a few ten picoliter per dot pattern; and

a face plate arranged to be facing the electron-emitting device, and said face plate mounting fluorescent material screen and having a shape and size substantially the same with that of the electron-emitting device substrate, wherein said fluorescent material screen is made up of three primary colors and black matrix area.